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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/614,637

07/07/2003

Koichi Takiguchi

14321.55

7656

22913

7590

02/25/2005

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EXAMINER

PAK, SUNG H

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 02/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/614,637	Applicant(s) TAKIGUCHI ET AL.	
	Examiner Sung H. Pak	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 is/are allowed.
- 6) ☒ Claim(s) 17 and 18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0104, 1104</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

Information disclosure statement filed 1/26/2004 and 11/18/2004 have been considered by the examiner.

Claim Objections

Claims 17-18 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 17-18 are apparatus claims directed to products, and are dependent on the method of using the product as recited in claim 1. A product claim is not patentably limited to the manner in which it is intended to be used. As such, product claims 17-18 could be infringed without infringing the method of using the product as recited in claim 1. Therefore, pursuant to MPEP 608.01(n), claims 17-18 are not proper dependent claims.

Allowable Subject Matter

Claims 1-16 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Multistage Mach-Zehnder (MZ) interferometers and methods of adjusting the phase control of multistage Mach-Zehnder (MZ) interferometers are known in the art. An exemplary multistage MZ interferometer and a method of adjusting the phase control based on its component output is

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disclosed by Takiguchi et al (IEEE Photonics Technology Letters, Vol. 6, No.1, pp 86-88, 1994.). However, none of the prior art fairly teaches or suggest such a method of adjusting the phase control comprising, *inter alia*, sequentially setting the phase control signal of symmetrical MZ interferometers after inputting low coherence light, and setting the phase control signal of asymmetrical MZ interferometer after inputting wavelength tunable coherent light based on correlation between respective phase control signals and respective optical intensity output, as claimed in the instant application.

Claims 17-18 contain allowable limitations as set forth above, and would be allowable if written in independent form or otherwise amended to overcome the objection discussed above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jinguji et al (US 5,572,611) discloses a multistage MZ interferometers and methods of optimizing MZ interferometers.

This application is in condition for allowance except for the following formal matters:

Objection of claims 17-18.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

An attempt had been made to contact the applicant's representative in order to resolve the claim objection via telephone interview. However, this attempt has not been successful, and a written Office Action is furnished addressing the claim objections.

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A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (571) 272-2353. The examiner can normally be reached on Monday- Friday, 9AM-5PM.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sung H. Pak
Examiner
Art Unit 2874

sp



Rodney Bovernick
Supervisory Patent Examiner
Technology Center 2800